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FARM BUSINESS AND SCIENCE NEWS.

A radio talk by Morse Salisbury, Chief of Radio Service, delivered in the Department of Agriculture period, National Farm and Home Hour, broadcast by a network of 50 associate NBC radio stations, Thursday, December 27, 1934.

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During the last five years there has been a steady flow of people from urban centers back to the land. Many who have lost their jobs in the city have gone back to live with their parents or relatives in the country. Others have moved to vacant farm dwellings to reduce the cost of living. How large has this movement been? How many such people were not living on a farm five years ago? The Census of Agriculture to be taken on January 2, 1935, seeks to answer these questions.

Statistics relating to the number of persons on farms, the number of farm dwellings unoccupied, the number of persons employed on farms and the value of farm garden vegetables grown in 1934 should be of particular value to welfare agencies, agricultural and other interested organizations in planning their programs for the coming year, as well as enabling them to place more families on a self-help basis.

This census is one of the federal activities designed primarily for the benefit of the agricultural industry and farmers can be of great assistance if they will write to the Bureau of the Census, Washington, D. C., for a sample copy of the farm schedule. By studying the questions they can have accurate answers ready for the enumerators who will call in January.

The likes and dislikes of a tiny insect are guiding State and Federal scientists in developing cranberries that will not fall before the ravages of false blossom, a virus disease that has threatened to cripple the cranberry industry of this country.

The role of the insect -- one of the many leafhoppers -- is that in feeding on infected cranberry plants and then passing to healthy plants it spreads the disease. Once a plant gets false blossom it is doomed. No cure has been found. Diseased plants often live for several years, but they bear no fruit after the first year, and even that is abnormal.

State entomologists of Massachusetts, New Jersey, and Wisconsin are cooperating with plant specialists of the United States Department of Agriculture in saving the cranberry industry from this untimely end. So far their efforts have been directed along two lines: An attack on the insect which carries the virus, by spraying and dusting, and by flooding; and breeding and selecting for propagation plants which for some unknown reason are distasteful to the leafhoppers. Cranberries are propagated vegetatively and in a relatively short time a new variety or strain is available for general use.

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The chief difficulty with selecting plants distasteful to the pests is that so often the fruit borne by these plants is likewise distasteful or at least unattractive to customers. To surmount this hazard H. F. Bain, of the Bureau of Plant Industry, has crossed several of these pest-resistant plants with plants now used commercially. He now has about 2,000 hybrid seedlings growing in New Jersey. These have not fruited yet, but should begin next summer, with a good crop in 1936. Then he can begin his search for plants which have good fruit but which still fail to satisfy the discriminating leafhoppers.

The cultivated cranberry is not a great deal different from the native or wild plant. Present cultivated varieties are selections made for the most part by farmers from desirable plants found growing in the wild.

The extent to which bacterial wilt of sweet corn (Stewart's Disease) will be a problem to sweet-corn growers in the northeastern States in any year, is forecast with fair accuracy by temperatures of the preceding winter months, in the opinion of Dr. Neil E. Stevens, of the United States Department of Agriculture. A mild winter or, better yet, several mild winters, are likely to be followed by outbreaks of the disease where non-resistant varieties are grown, he says. On the other hand, severe outbreaks do not occur after unusually cold winters. Dr. Stevens' conclusions are based upon and verified by a study of winter temperatures and Stewart's Disease since about 1900.

He has found that when the average of temperatures for December, January, and February was 30 degrees or below, there was no serious occurrence of the disease in the following growing season, but when the average was 34 degrees or more, heavy losses were likely.

Bacterial wilt of sweet corn reached its climax in 1932-33, when losses were unprecedented not only in the Central and East Central States but farther north as well, where susceptible varieties long had been grown successfully. The winters preceding the 1932 and 1933 crops were unusually mild. Losses, however, dropped back to normal in 1934 following a winter of unusual severity in the Northeastern States.

If Dr. Stevens' conclusions are correct, it might be expected that in southern Illinois, Indiana and Ohio, northern Virginia, and Maryland and farther south, where average winter temperatures are about 35 degrees or above, Stewart's Disease would be so common that susceptible varieties of sweet corn cannot be grown with profit. Such is the case.

It might also be expected that in northern Illinois, Indiana, Ohio, Pennsylvania, New York, and all of Michigan and in New England north of Connecticut, where average temperatures for the winter months are about 25 degrees or below, the disease would be rare. This also is the case.

Between these two regions is a zone including Long Island, much of New Jersey and southern Pennsylvania, and the higher parts of Maryland, where winter temperatures are intermediate and there are years of both severe and slight loss.

In 1931 Stewart's Disease was fairly severe in Illinois and Indiana, not severe if even present in southern Conn., and caused no serious commercial losses in N. Y. north of Long Island. Such a forecast could have been made from temperature charts in these sections.

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